

Work Order ID 147185

147185

Page 1

Item ID: D5162-041

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Seat Structure Assembly

Stop

NS2

Start Date: 6/10/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/17/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

SH

Date: *6/6/16*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr	Revision Nbr								
D3016	(DEO) A1								
D3017	C								
D5162	A								
D5189	A								

105

Pick Kit

0.00

105

Packaging

Memo

0.05

Packaging

1 EL 16-6-20

110

Weld per dwg A/R 4130 rod Batch: *4112725* 0.00

110

Large Fab

Memo

0.17

Large Fab

FABRICATE D5189-041 AS PER DWG AND BY USING DT8622.

DO NOT OPEN HOLES TO SIZE, IT WILL BE OPEN UPON FINAL ASSEMBLY.

ONLY WELD STUD D4667-041 TO TUBE. END CAP WILL BE WELDED AFTER OPENING HOLES IN TUBE.

1 EL 16-6-20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 147185

147185

Page 2

June 06, 2016 3:24:05 PM

Item ID: D5162-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Seat Structure Assembly
 Start Date: 6/10/2016 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 6/17/2016 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	Weld per dwg A/R 4130 rod Batch: <u>M122925</u>	0.00							
120									
Large Fab	Memo	0.17							
Large Fab	FABRICATE (2) D3016-041 AS PER DWG.								
	WELD ASSEMBLY USING DT8597 WELD JIG.								
	DO NOT DRILL HOLES AS THEY WILL BE TRANSFER DRILL AT FUTHER STEP.								
	DO NOT WELD GUSSETS AND BRACKET THEY WILL BE WELDED AT A FUTHER STEP.								

1 EL 166.20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Work Order ID 147185***147185***

Page 3

June 06, 2016 3:24:05 PM

Item ID: D5162-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Seat Structure Assembly
Start Date: 6/10/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 6/17/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Large Fab Large Fab	Weld per dwg A/R 4130 rod Batch: <u>M127925</u> Memo FABRICATE D3017-041 AS PER DWG: USE DT8598 FOR BENDING D3017-1/-3 TUBE. USE DT8621 FOR DRILLING (#30 DRILL) BACK FRAME. ***DO NOT OPEN HOLES IT WILL BE DONE AT FUTHER STEP*** USE DT8622 FOR DRILLING (#30 DRILL) D3017-5. ***DO NOT OPEN HOLES IT WILL BE DONE AT FUTHER STEP*** USE DT8598 JIG FOR WELDING TUBES, LUGS AND ONE END CAP, OTHER END CAP WILL BE WELDED AFTER OPENING HOLES.	0.00 0.17				<u>1</u>	<u>2</u>	<u>16620</u>	
140 *140* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<u>①</u>	<u>160620</u>		DAS 9 9-88

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
QC / QA Coordinator Approval									

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	Pressure/Forced ☐	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	Bending ☐	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	Centre Not Concentric ☐	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	Cracks ☐	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	Crimp/Kink/Ripple/Wave ☐	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	Cuffs ☐	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	Crushing ☐	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	Heat Treat ☐	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	Wave/Twist in Tube ☐	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	Marks/Chatter ☐	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Work Order ID 147185***147185***

Page 4

June 06, 2016 3:24:05 PM

Item ID: D5162-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Seat Structure Assembly
Start Date: 6/10/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 6/17/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150		0.00							
150									
Large Fab	Memo	0.17							
Large Fab	1- BOLT SEAT FRAME TO ASSEMBLY PLATE DT8624.								
	2- TRANSFER DRILL D5189-041 TO D3016-041 AS PER DWG USING #30 DRILL AND CLECO THEN DRILL TO FINISH SIZE.								
	3- TRANSFER DRILL SEAT PAN TO D5189-041 AND 3016-041.								
	4- TRASFER DRILL SEAT AND D3016-041 TO D3017-041 USING DT 2 AND USING TOOL TO ACHIEVE DESIRED ANGLE ON BACK REST.								
155									
	Weld per dwg A/R 4130 rod Batch: <u>M/27925</u>	0.00							
155									
Large Fab	Memo	0.17							
Large Fab	ARMREST:								
	1- ASSEMBLE AND TRANSFER DRILL D5189-043 TO D3017-041. OPEN HOLES TO FINISH SIZE AS PER DWG								
	STRUT:								
	1-								
	SEAT BRACE:								
	1- USE DT10132 AND DT10133 TO TRANSFER DRILL HOLES IN SEAT PAN AND SEAT BRACE.								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Page 6

DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐					
Misidentified ☐	Past Due ☐						

Work Order ID 147185

June 06, 2016 3:24:05 PM

147185

Page 7

Item ID: D5162-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Seat Structure Assembly
 Start Date: 6/10/2016 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 6/17/2016 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
200									
Small Fab	Memo	0.33							
Small Fab	(TO FABRICATE D5162-051) ASSEMBLE D3023-1 PANEL TO D3017-041 BACK FRAME AS PER DWG D5162-051								
210	QC5- Inspect part completeness to step on W/O	0.00							DAS 9 9-89
210									
QC	Memo	0.00							
Quality Control									
220	Grey Sandtex(Ref:4.3.5.6) per OSI005 4.3	0.00							
220	<i>m 130-746.</i>								
Powdercoat	Memo	0.08							
Powder Coating	POWDER COAT ALL INDIVIDUAL PARTS								
	START TIME: <i>9:15.</i>								
	OVEN TEMPERATURE: <i>320°</i>								
	FINISH TIME: <i>9:45.</i>								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 147185

147185

Page 8

June 06, 2016 3:24:05 PM

Item ID: D5162-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Seat Structure Assembly
 Start Date: 6/10/2016 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 6/17/2016 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	DAS
230	QC3- Inspect Part Finish	0.00								36
230										9-89
QC	Memo	0.00				<i>H</i>			<i>16/06/21</i>	
Quality Control										
240		0.00								36
240										9-89
Small Fab	Memo	0.17				<i>H</i>			<i>16/06/21</i>	
Small Fab	ASSEMBLE AS PER DWG									
250	QC5- Inspect part completeness to step on W/O	0.00								36
250										9-89
QC	Memo	0.00								
Quality Control										

9102 1 2 NUG
 DAS
 30
 9-89

(1)

JUN 21 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								

Work Order ID 147185

147185

Page 9

June 06, 2016 3:24:05 PM

Item ID: D5162-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Seat Structure Assembly
Start Date: 6/10/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 6/17/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	Identify as per dwg & Stock Location: GA	0.00							
260									
Packaging	Memo	0.00			DAS	1			
Packaging					30				
					9-89				JUN 2 1 2016
270	QC21- Final Inspection - Work Order Release	0.00							
270									
QC	Memo	0.02							
Quality Control									

MCS JUN 2 1 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval				
Description Work Order Deviation				Disposition				Completed By			
								Lead hand / Supervisor Approval Verification			
										QC / QA Coordinator Approval	
Root Cause				FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : _____											

Picklist Print

June 06, 2016 3:24:11 PM

Page 1

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 14.11.05 NEW ISSUE DD VERF:JLM IPP
REV:B 15-02-06 AS PER DWG REV.A DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D5190-1		Manufactured	No			110	Each	9.0000	1	1			
---------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

D5190-1

Armrest Fitting

**

EL 16.6.20

Location

Loc Qty

Loc Code

WA002

1

138387

1

WA003

8

145951

8

D5190-3		Manufactured	No			110	Each	13.0000	1	1			
---------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

D5190-3

Weld Pin

**

EL 16.6.20

Location

Loc Qty

Loc Code

WA001

1

134241

1

WA002

12

145521

12

M4130NT0.750W.049		Purchased	No			105	f	88.4500	15.5	16.31579			
-------------------	--	-----------	----	--	--	-----	---	---------	------	----------	--	--	--

M4130NT0 750W 049

4130 RD Tube .750 x.049W

**

EL 16.6.20

Location

Loc Qty

Loc Code

MAT033

88.45

m122425

20

m134001

28.45

m134845

40

181

Picklist Print

June 06, 2016 3:24:11 PM

Page 2

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

D4667-041 Manufactured No

110 Each 10.0000 1 1

D4667-041

Armrest Stud Assembly

**

EL 16-6-20

Location

Loc Qty

Loc Code

WA002

10

140230

10

M4130NT0.500W.049 Purchased No

105 f 284.2650 4.33 4.557895

M4130NT0 500W 049

4130 RD Tube .500 x.049W

**

EL 16-6-20

Location

Loc Qty

Loc Code

MAT032

284.265

m124293

12.166

m127111

8.633

m128713

21

m129826

170.4

m130551

72.066

M4130NT1.000W.120 Purchased No

105 f 9.7500 1.2 1.263158

M4130NT1 000W 120

4130 RD Tube 1.00 x .120wall

**

EL 16-6-16

Location

Loc Qty

Loc Code

MAT033

9.75

m131146

9.75

D3020-1 Manufactured No

120 Each 14.0000 4 4

D3020-1

Fitting

**

EL 16-6-14

Location

Loc Qty

Loc Code

WA002

14

141541

14

4

Picklist Print

June 06, 2016 3:24:11 PM

Page 3

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

D3017-7 Manufactured No 130 Each 23.0000 3 3

D3017-7

Lug

**

EL 16620

Location

Loc Qty

Loc Code

WA002

23

137735

23

3

D3023-1 Manufactured No 130 Each 0.0000 1 1

D3023-1

Back Panel

**

EL 16616

M4130NT0.750W.083

Purchased No

105

f

23.4400

2.5

2.631579

M4130NT0 750W 083

4130 RD Tube .750 x.083W

**

EL 16616

Location

Loc Qty

Loc Code

MAT032

23.44

m134001

23.44

2.5'

D3022-1 Manufactured No 150 Each 0.0000 1 1

D3022-1

Seat Pan

**

EL 16620

D3016-15

Manufactured No

165

Each

12.0000

2

2

D3016-15

Gusset

**

EL 16620

Location

Loc Qty

Loc Code

WA002

12

119895

12

2

D3016-13 Manufactured No 165 Each 18.0000 2 2

D3016-13

Bracket

**

EL 16620

Location

Loc Qty

Loc Code

WA002

18

141449

18

2

June 06, 2016 3:24:11 PM

Shop Packet Print

Page 3

Picklist Print

June 06, 2016 3:24:11 PM

Page 4

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

D3016-17 Manufactured No

165 Each 34.0000 2 2

D3016-17

Gusset

**

EL 16-6-20

Location

Loc Qty

Loc Code

WA002

34

138268

34

2

D3017-11 Manufactured No

165 Each 56.0000 4 4

D3017-11

Cap

**

EL 16-6-20

Location

Loc Qty

Loc Code

WA001

56

142890

56

4

MS20600-AD4W2 Purchased No

200 Each 309.0000 46 46

MS20600-AD4W2

Rivet

**

46 40

16/06/20

Location

Loc Qty

Loc Code

GA

159

m126475

159

40

ST308

150

m134762

150

AN4-6A Purchased No

240 Each 416.0000 1 1

AN4-6A

BOLT

**

JUN 21 2016

DAS 6 9-89

Location

Loc Qty

Loc Code

over003

200

M134852

200

ST345

216

M130851

37

M134634

179

1

DAS 36 9-89

*MS20600AD4W3

M129795

62

16/06/20

June 06, 2016 3:24:11 PM

Shop Packet Print

Page 4

Picklist Print

June 06, 2016 3:24:11 PM

Page 5

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

NAS43DD4-16FC

Purchased

No

240

Each

22.0000

2

2

NAS43DD4-16FC

Spacer

Location

Loc Qty

Loc Code

ST550

22

m130835

4

m133790

18

AN4-4A

Purchased

No

240

Each

157.0000

1

1

AN4-4A

BOLT

Location

Loc Qty

Loc Code

FP001

2

m125709

2

ST346

155

m129390

155

D5159-043

Manufactured

No

105

Each

3.0000

1

1

D5159-043

Seat Back Brace Assembly

Location

Loc Qty

Loc Code

ST358

3

143444

1

145854

2

MS27039-4-20

Purchased

No

240

Each

34.0000

4

4

MS27039-4-20

Screw

Location

Loc Qty

Loc Code

ST279

34

m132551

34

DAS
6
9-89

DAS
6
9-89

JUN 21 2016

16620

DAS
6
9-89

JUN 21 2016

Picklist Print

June 06, 2016 3:24:11 PM

Page 6

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

MS20600-AD4W4

Purchased

No

240

Each

1,524.000

4

4

MS20600-AD4W4

Rivets

Location

Loc Qty

Loc Code

CCK005

1482

M133990

1482

ST308

42

M132640

42

MS27039-1-19

Purchased

No

240

Each

132.0000

4

4

MS27039-1-19

Screw

Location

Loc Qty

Loc Code

GA

132

m134134

132

D3024-1

Manufactured

No

240

Each

8.0000

3

3

D3024-1

Spacer

Location

Loc Qty

Loc Code

ST015

8

136424

8

MS27039-1-17

Purchased

No

240

Each

194.0000

1

1

MS27039-1-17

Screw (601.1954)

Location

Loc Qty

Loc Code

GA

185

120142

36

m127831

149

ST280

9

m127305

9

DAS
6
9-89

DAS
6
9-89

DAS
6
9-89

DAS
6
9-89

JUN 21 2016

June 06, 2016 3:24:11 PM

Shop Packet Print

Page 6

Picklist Print

June 06, 2016 3:24:11 PM

Page 7

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

MS24693-S49 *S272* Purchased

No

240

Each

200.0000

4

4

DAS

MS24693-S49

Screw

**

129682

6
9-89

Location

Loc Qty

Loc Code

ST286

200

m130835

200

NAS1149D0332J Purchased

No

240

Each

1,258.000

30

30

NAS1149D0332.J

Washer

**

125807

DAS
6
9-89

Location

Loc Qty

Loc Code

CA

6

m129682

6

FP001

22

m134502

22

ST260a

1200

m134738

600

m134848

600

ST264

30

m134502

30

MS20600-AD4W5 Purchased

No

240

Each

444.0000

8

8

DAS

MS20600-AD4W5

Blind Rivet

**

6
9-89

Location

Loc Qty

Loc Code

ST308

307

m131340

11

m132769

296

WA004

137

m131618

134

m132640

3

JUN 21 2016

June 06, 2016 3:24:11 PM

Shop Packet Print

Page 7

Picklist Print

June 06, 2016 3:24:11 PM

Page 8

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L3

Purchased

No

240

Each

1,277.000

17

17

MS21042L3

Nut

DAS

6

9-89

Location

Loc Qty

Loc Code

FP001

68

m133790

68

GA

269

m133790

3

m134360

266

ST303

940

m134039

12

m134634

328

m134754

600

17

NAS1149D0432J

Purchased

No

240

Each

867.0000

17

17

NAS1149D0432J

WASHER

DAS

6

9-89

Location

Loc Qty

Loc Code

GA

26

m131026

26

ST264

841

m134676

841

17

D5159-041

Manufactured

No

105

Each

3.0000

1

1

D5159-041

Seat Back Brace Assembly

EL 16.6.20

Location

Loc Qty

Loc Code

ST358

3

143489

1

146090

2

1

Picklist Print

June 06, 2016 3:24:11 PM

Page 9

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

AN4-14A

Purchased

No

240

Each

263.0000

2

2

AN4-14A

Bolt

Location

Loc Qty

Loc Code

FG

5

122141

5

over003

100

M134754

100

ST344

158

M134508

8

M134573

150

D3031-1

Manufactured

No

240

Each

14.0000

2

2

D3031-1

Loop

Location

Loc Qty

Loc Code

GA

14

134318

4

145241

10

AN3-12A

Purchased

No

240

Each

97.0000

3

3

AN3-12A

Bolt

Location

Loc Qty

Loc Code

ST349

97

m133064

16

m134257

81

JUN 21 2016

Picklist Print

June 06, 2016 3:24:11 PM

Page 10

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

240

Each

1,887.000

8

8

MS21042L4

Locknut

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

184

m133769

184

OVER007

1000

m134861

1000

ST303

609

m134762

609

ST305

94

m130922

94

D2199-31

Manufactured

No

105

Each

2.0000

1

1

D2199-31

Strut Details

Location

Loc Qty

Loc Code

ST352

2

139863

2

MS27039-1-20

Purchased

No

240

Each

128.0000

2

2

MS27039-1-20

Screw

Location

Loc Qty

Loc Code

ST280

128

124326

128

MS27039-4-21

Purchased

No

240

Each

29.0000

2

2

MS27039-4-21

Screw

Location

Loc Qty

Loc Code

ST279

29

m132803

29

JUN 21 2016

16.6.20

JUN 21 2016

DAS
6
9-89

DAS
6
9-89

June 06, 2016 3:24:12 PM

Shop Packet Print

Page 10

Picklist Print

June 06, 2016 3:24:12 PM

Page 11

Work Order ID: 147185

147185

Parent Item: D5162-041

D5162-041

Parent Item Name: Seat Structure Assembly

Start Date: 6/10/2016

Required Date: 6/17/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-18

Purchased

No

240

Each

1,805.000

3

3

MS27039-1-18

Screw

Location

Loc Qty

Loc Code

GA

251

123522

55

124326

196

over006

1373

124326

1373

ST280

181

124326

181

D5159-045

Manufactured

No

105

Each

2.0000

1

1

D5159-045

Seat Rib Assembly

Location

Loc Qty

Loc Code

ST358

2

138038

1

140228

1

AN970-4

Purchased

No

240

Each

90.0000

1

1

AN970-4

Washer

Location

Loc Qty

Loc Code

ST260a

50

m133769

50

ST321

40

m133992

40

DAS
6
9-35

JUN 21 2016

EL 16620

DAS
JUN 21 2016
9-35